

REMARKS

I. Status of Claims

Claims 8-11, 13, 15 and 17-22 are pending in this application, the independent claims being claims 8, 13, 15 and 22. By this Amendment, claims 8, 13, 15 and 22 are amended. Claims 1-7, 12, 14 and 16 previously were canceled.

II. Summary of the Official Action

In the Official Action, claims 8-10, 15, 17, 19, 20 and 21 were rejected under 35 U.S.C. §102(e), as anticipated by of U.S. Patent No. 6,204,877 (Kiyokawa); claim 22 was rejected under 35 U.S.C. 102(b), as anticipated by U.S. Patent No. 5,956,084 (Moronaga); claim 11 was rejected under 35 U.S.C. §103(a), as unpatentable over the Kiyokawa '877 patent in view of U.S. Patent No. 6,538,692 (Niwa); claim 13 was rejected under 35 U.S.C. §103(a), as unpatentable over U.S. Patent No. 6,297,870 (Nanba) in view of U.S. Patent No. 6,788,322 (Cook) and the Moronaga '084 patent; and claim 18 was rejected under 35 U.S.C. §103(a), as unpatentable over the Kiyokawa '877 patent in view of the Cook '322 patent.

Reconsideration and withdrawal of the rejections respectfully are requested in view of the above amendments and the following remarks.

III. Amended Claims

The rejections of the claims over the cited art respectfully are traversed. Nevertheless, without conceding the propriety of the rejections, independent claims 8, 13, 15 and 22 further have been amended herein more clearly to recite various novel aspects of the claimed invention, with particular attention to the Examiner's comments. Support for the amendments may be found in the original application, e.g., at page 40, lines 5-10 and page 51, line 10. No new matter has been added.

IV. Response to Outstanding Rejections

The rejections of the claims over the cited art respectfully are traversed. The present invention relates to a novel image-capturing device and electronic camera. Independent claims 8, 13, 15 and 22 relate to four aspects of the claimed invention.

A. Claimed Invention

In one aspect, as recited in independent claim 8, the claimed invention relates to an image-capturing device comprising an image sensor that captures a subject image and generates image data, an operation member that is operated to cause the image sensor to capture a subject image and generate image data, a memory, and an image storage control unit. The image storage control unit controls transfer of image data, and is operable in a communication mode, to automatically transfer image data generated by the image sensor to an external device via a communication circuit capable of communicating with the external device to store the image data in the external device, and when communication with the external device is disabled, to transfer the image data generated by the image sensor to the memory, so that the operation member can be operated to capture a next subject image.

In another aspect, independent claim 15 recites similar features with respect to an electronic camera that uses a wireless communication circuit to transfer image data generated by the image sensor to an external device by wireless communication, wherein, when wireless communication with the external device is disabled, image data is generated by the image sensor is transferred to the memory so that the operation member can be operated to cause the image sensor to capture a next subject image.

In another aspect, independent claim 22 recites similar features with respect to an image-capturing device further comprising a setting unit that sets either the memory or an external device as a storage device where the image data is to be stored, and a wireless communication circuit, wherein, when the external device is set as the storage device and

wireless communication with the external device is disabled, image data is transferred to the memory so that the operation device can be operated to cause the image sensor to capture a next subject image.

In each of these aspects (claims 8, 15 and 22), in one operation mode the image storage control unit (1) transfers image data generated by the image sensor to an external device, and (2) when communication to the external device is disabled (wireless communication in claims 15 and 22), transfers image data generated by the image sensor to the memory, so that the operation device can be operated to cause the image sensor to capture a new subject image. This image data transfer control feature provides a significant advantage over prior art systems in that it effectively utilizes internal and external memory to save image data of a first subject image and permit capture of a next subject image in a case when communication with the external device is disabled.

In another aspect, as recited in independent claim 13, the claimed invention relates to an image-capturing device comprising an image sensor that captures a subject image and generates image data, a connection unit that electrically, detachably and exclusively connects to a main body of the image capture device either a portable memory or a wireless communication circuit capable of wirelessly communicating with an external device, a detection unit that detects whether or not the wireless communication circuit is connected at the connection unit, and an image storage control unit. The image data control unit controls the transfer of image data, to automatically and directly transfer image data generated by the image sensor to the portable memory if the portable memory is connected at the connection unit, and to automatically and wirelessly transfer image data generated by the image sensor to the external device via the wireless communication circuit when the detection circuit detects that the wireless communication circuit is connected at the connection unit.

In this aspect (claim 13), the connection unit is capable of being directly and exclusively connected to either a portable memory or a wireless communication circuit, and the image storage control unit automatically stores image data captured/generated by the image sensor in either the portable memory or in an external device via the wireless communication circuit connected to the connection unit. This image data transfer control feature provides a significant advantage over prior art systems in that it increases options in an efficient, portable, image-capturing device.

B. Prior Art Distinguished

Applicant submits that the prior art fails to anticipate the claimed invention. Moreover, Applicant submits there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Claims 8-11, 15 and 17-22

The Kiyokawa '877 patent relates to an electronic image pickup system for transmitting image data by remote control, and discloses an electronic image pickup system including a master side electronic camera and a slave side electronic camera, where the master side electronic camera transmits operation data to the slave side electronic camera to remotely control a camera photographing operation, and the slave side electronic camera transmits a picked-up image signal to the master side electronic camera to display the image signal on an electronic viewfinder of the master side electronic camera. However, Applicant submits that the Kiyokawa '877 patent fails to disclose or suggest at least the above-discussed features of the claimed invention.

Initially, with respect to claims 15 and 22, nowhere is the Kiyokawa '877 patent understood to disclose or suggest the feature of wireless communication of image data to an external device, as disclosed in the present application and recited in claims 15 and 22.

Applicant submits that the Kiyokawa '877 patent also fails to disclose or suggest at least the feature of automatically transferring image data generated by an image sensor to an external device to store the image data in the external device, and when communication with the external device is disabled, to transfer image data generated by the image sensor to a local/internal memory, so that the operation member can be operated to cause the image sensor to capture a next subject image, as disclosed in the present application and variously recited in claims 8, 15 and 22. Rather, in the Kiyokawa '877 patent system, in the slave side electronic camera, at step S52, the system controller 20 checks whether the slave side electronic camera has received an image data transmission stop command (which is transmitted from the master side electronic camera); if the slave side electronic camera has received an image data transmission stop command, then at step S53 the system controller 20 performs a control operation to stop image data transmission. Nowhere is the Kiyokawa '877 patent understood to disclose or suggest what happens if, or when, communication with the external device is disabled.

Applicant submits that the Kiyokawa '877 also fails to disclose or suggest the claimed image capture device comprising an operation member that operates to cause the image sensor to capture a subject image. The Kiyokawa '877 system includes two electronic cameras each having an operation member that, when operating independently, operates to cause an image sensor of the electronic camera to capture an image signal. However, in the disclosed system, when an electronic camera of the Kiyokawa '877 patent is operating as a slave side electronic camera (as applied to claims 8, 15 and 22 of the present application), it does not include an operation member that is operated to cause the image sensor to capture an image signal; rather, the slave side electronic camera captures an image signal in accordance with operation data communicated to the slave side electronic camera from the master side electronic camera. Nowhere is the Kiyokawa '877 patent understood to disclose or suggest

that a slave side electronic camera operation member is operated to cause the image sensor to capture an image signal, to cause an image sensor to generate an image signal to be transmitted to an external device, as disclosed in the present application and recited in claims 8, 15 and 22.

The Moronaga '084 patent relates to an electronic still-video camera, and playback apparatus therefor being capable of storing image data when the storage capacity of a memory card is exceeded. However, Applicant submits that the Moronaga '084 patent fails to disclose or suggest at least the above-discussed features of the claimed invention.

Initially, with respect to claims 15 and 22, nowhere is the Moronaga '084 patent understood to disclose or suggest the feature of wireless communication of image data to an external device, as disclosed in the present application and recited in claims 15 and 22.

Applicant submits that the Moronaga '084 patent also fails to disclose or suggest at least the feature of automatically transferring image data generated by an image sensor to an external device to store the image data in the external device, and when communication with the external device is disabled, to transfer image data generated by the image sensor to a local/internal memory, so that the operation member can be operated to cause the image sensor to capture a next subject image, as disclosed in the present application and variously recited in claims 8, 15 and 22. Rather, the Moronaga '084 patent system is understood merely to describe a system in which, e.g., when shooting of a 12th frame ends, the numeral underlying "IN 12" becomes "12", which is equal to the number of photographable frames in an internal RAM 28, and at this time, the mark moves to the display section 12A, as shown in display example 59, and image data resulting from a photographic operation for the 13th frame onward is recorded in the external RAM 31 in memory cartridge 29. (see column 13, lines 15-21). Nowhere is the Moronaga '084 patent understood to disclose or suggest a

system and operation in which communication with an external device is disabled, let alone what happens in such event.

Applicant submits that **the Niwa '692 patent** fails to remedy the deficiencies of the Kiyokawa '877 patent and the Moronaga '084 patent. The Niwa '692 patent relates to a dynamic storage control method and system, and was cited for its alleged disclosure of an image storage control unit that detects whether or not a storage capacity of an external device is sufficient, and keeps image data for local storage if the storage capacity of the external device is detected to be insufficient. Without conceding the propriety of the Examiner's characterizations of the Niwa '692 patent, Applicant submits that the Niwa '692 patent fails to disclose or suggest at least the above-discussed features of the claimed invention. Nowhere is the Niwa '692 patent understood to disclose or suggest at least the feature of an image storage control unit that controls transfer of image data, to automatically transfer image data generated by an image sensor to an external device to store the image data in the external device, and when communication with the external device is disabled, to transfer image data generated by the image sensor to a local/internal memory, so that the operation member can be operated to cause the image sensor to capture a next subject image, as disclosed in the present application and variously recited in claims 8, 15 and 22. Nor is the Niwa '692 patent understood to add anything to the Kiyokawa '877 patent or the Moronaga '084 patent that would make obvious the claimed invention.

Applicant submits that **the Cook '332 patent** also fails to remedy the deficiencies of the Kiyokawa '877 patent and the Moronaga '084 patent. The Cook '332 patent relates to a wireless imaging device and system, and was cited for its alleged disclosure of a wireless communication medium. Without conceding the propriety of the Examiner's characterizations of the Cook '332 patent, Applicant submits that the Cook '332 patent fails to disclose or suggest at least the above-discussed features of the claimed invention. Nowhere is

the Cook '332 patent understood to disclose or suggest at least the feature of an image storage control unit that controls transfer of image data, to automatically transfer image data generated by an image sensor to an external device to store the image data in the external device, and when communication with the external device is disabled, to transfer image data generated by the image sensor to a local/internal memory, so that the operation member can be operated to cause the image sensor to capture a next subject image, as disclosed in the present application and variously recited in claims 8, 15 and 22. Nor is the Cook '332 patent understood to add anything to the Kiyokawa '877 patent, the Moronaga '084 patent and/or the Niwa '692 patent that would make obvious the claimed invention.

Claim 13

The Nanba '870 patent relates to a photographing apparatus, method for recording an image by the photographing apparatus, and method for reproducing an image by the photographing apparatus. The Nanba '870 patent discloses a system including a photographing apparatus (camera) that can transfer an image to an image processing apparatus (PC) with a first recording medium (hard disk HD), or to a second recording medium (memory card 8) detachably provided to the photographing apparatus. Thus, the Nanba '870 patent discloses a photographing apparatus (camera) system including a slot 17 for receiving a memory card 8 (column 3, line 19; Fig. 3) and a USB communication I/F 213 (column 6, lines 1-3) for connection with a PC. However, Applicant submits that the Nanba '870 patent fails to disclose or suggest at least the above-discussed features of the claimed invention. Rather, in the Nanba '870 patent, the memory card slot 17 and the USB I/F 213 are provided separately. Nowhere is the Nanba '870 patent understood to disclose or suggest the features of an image-capturing device comprising a connection unit that electrically, detachably and exclusively connects to a main body of the image-capturing device either a portable memory or a wireless communication circuit capable of wirelessly communicating

with an external device, a detection unit that detect whether or not the wireless communications circuit is connected a the connection unit, and an image storage control unit that controls transfer of image data, to automatically and directly transfer the image data from a buffer memory to a portable memory if the portable memory is connected at the connection unit and to automatically and wirelessly transfer the image data from the buffer memory to the external device via the wireless communication circuit when the detection unit detects that the wireless communication circuit is connected at the connection unit, as disclosed in the present application and recited in claim 13.

Applicant submits that **the Goto '273 patent** fails to remedy the deficiencies of the Nanba '870 patent. The Goto '273 patent relates to a wireless communication data storing medium for receiving a plurality of carriers of proximate frequencies and a transmission receiving method, and was cited for its alleged disclosure of an IC card (Fig. 1) that is used in cameras as a detachable and portable external memory device, and which can be used to store data and wirelessly transfer data to an external device like a PC via a card-reader-writer connected to the PC. Without conceding the propriety of the Examiner's characterizations of the Goto '273 patent, Applicant submits that the Goto '273 patent fails to disclose or suggest at least the above-discussed features of the claimed invention. Initially, Applicant submits that the Goto '273 patent does not disclose a wireless communication circuit that is connected at a connection unit of an image capturing device and capable of wirelessly communicating with an external device, as disclosed in the present application and recited in claim 13. Rather, the Goto '273 patent is understood merely to describe a system in which a CPU 10 is adapted to output transmission data H to the card reader-writer 1 as required (see column 4, lines 5-6). In other words, the Goto '273 patent discloses that data stored in the data memory 111 in the IC card is output. Nowhere is the Goto '273 patent understood to disclose or suggest that the IC card is connected at a certain device and data is output by wireless

communication via the IC card to an external device other than the certain device, as disclosed in the present application and recited in claim 13. Nor is the Goto '273 patent understood to add anything to the Namba '870 patent that would make obvious the claimed invention.

The Moronaga '084 patent further is cited for its alleged disclosure of an electronic still video camera having an internal RAM to be directly transferred automatically to an external RAM via a switch when an internal frame is full. Without conceding the propriety of the Examiner's characterization, Applicant submits that the Moronaga '084 patent fails to remedy the above-discussed deficiencies of the Namba '870 patent and the Goto '273 patent, or add anything thereto that would make obvious the claimed invention.

For the above reasons, Applicant submits independent claims 8, 13, 15 and 22 are allowable over the prior art.

Claims 9-11 and 17-21 depend from independent claims 8 and 15, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of its respective base claim, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

V. Conclusion

Applicant believes the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submits that this application is in condition for allowance. Reconsideration of the claims and passage to issue of the application at the Examiner's earliest convenience earnestly are solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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